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| 09/976,077 | 10/15/2001 | Tohru Kimura | 02860.0691 | 1552 |

7590 02/24/2004

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| EXAMINER |
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THOMPSON, TIMOTHY J

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| ART UNIT | PAPER NUMBER |
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2873

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,077

Applicant(s)

KIMURA ET AL.

Examiner

Timothy J Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,20-70 and 72-202 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18,20-70 and 73-202 is/are allowed.
- 6) ☒ Claim(s) 72 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION***Terminal Disclaimer***

A terminal disclaimer was received on 11/20/2003. The terminal disclaimer pertaining to claims 93-98, 134, 141-146, 158-160, 163, 164 and claims 99-101 had not been approved at the time of the mailing of this office action, therefore the notice of allowance of these claims, as detailed below, and claims 99-101, 135-145, 147, 148, 161, 162, 165-167 which depend from these claims, are contingent upon the approval of the terminal disclaimer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al.(U.S. Patent No. 6,058,095) in view of Maruyama(U.S. Patent No. 6,480,344).

Regarding claim 72, Yamamoto et al. discloses a first lens having a positive refractive power(fig 1, 3); and a second lens having a positive refractive power(fig 1, 4); wherein the first lens and the second lens are aligned in this order from a light source side of the objective lens(fig 1), $(r_2 + r_1)/(r_2 - r_1) = 2.3$ (table 1). Yamamoto

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et al. does not disclose a ring shaped diffractive structure on the second surface. However, Maruyama discloses a ring shaped diffractive structure on the second surface of the objective lens(fig 1a-c and claim 1). It would have been obvious to one skilled in the art to place a diffractive ring on the second surface of the objective lens as shown by Maruyama, in the optical pickup lens of Yamamoto et al., since as shown by Maruyama, diffractive surfaces are commonly placed on objective lenses so as to allow different wavelength to diffracted differently thus allowing the use of two kinds of optical discs.

Allowable Subject Matter

Claims 1-18, 20-70, 73-202 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularity or in combination fails to anticipate or fairly suggest the limitations of the independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 1, 18, 25, 32, 56, 67-70, 73, 93, 102, 134, 146, 149, 158, 168, 184-188 with the important features being the conditional formula pertaining to; specific focal lengths; NA; WD; X1; X3; ENP; PD; PT; CA; SA; radius of curvature of the objective lens; excessive axial chromatic aberration correction such that a focal length is made longer; the coupling lens is moved along an optical axis direction such that a variation of the spherical aberration generated at each optical surface

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of the light converging optical system is corrected; the specific gravity of 2.0 or less. Therefore claims 1-18, 20-70, 73-202 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (571) 272-2328.

T.J.T. 

2/20/04